

Appl. No. : 10/522,129
Filed : December 27, 2005

REMARKS

I. Claim Objection

Claims were objected to due to the punctuation and grammatical errors that occurred in the previous claim amendments. Applicant submits that the errors were corrected while preparing the newly amended claim set. Accordingly, Applicant respectfully requests the claim objections be withdrawn.

II. Allowable Subject Matter: Objections of Claims 3, 6-8

Claims 3, 6-8 were objected to as being dependent upon a rejected base claim. Claim 3 has been amended and rewritten in independent form. As amended, Claim 3 recites a combination of claim limitations including “an upper claw and a lower claw, each positioned on all four free ends of said intermediate frames”. Applicant respectfully submits, as noted by the Examiner, that the orientation and positions of the claws recited in Claim 3 are not found in cited references. Claims 7 and 8 have been rewritten to depend from Claim 3. Claim 6 has been rewritten to depend from Claim 1. Applicant respectfully submits that Claim 1 is allowable for reasons set forth in Section III below. Accordingly, Applicant respectfully requests the claim objections be withdrawn and the claims be allowed.

III. Claim Rejections

By this paper, Claims 1-12 have been amended. The changes to the claims are fully supported in the as-filed application, and, thus, there is no issue of new matter. After entry of the foregoing amendments, Claims 1-12 are pending in the application. Reconsideration and allowance of the claims in light of the present remarks is respectfully requested.

A. § 102(b) Anticipation Rejection of Independent Claims 1

Independent Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by Ono (U.S. Patent No. 6,161,359).

Appl. No. : 10/522,129
Filed : December 27, 2005

To Anticipate a Claim, the Reference Must Teach Every Element of the Claim

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Analysis

As amended, Claim 1 recites a combination of claim limitations including: "at least four connected pairs of tube-shaped upright elements," each provided with a plurality of C-shaped coupling members which "*substantially encompass* the circumference of the upright element" at each location they are provided. Claim 1 further recites "at least one adjustable spindle assembly ... provided with a coupling and anti-flexure part which is also provided with a plurality of C-shaped coupling members substantially encompassing the circumference of the coupling part."

The Office Action refers to "flanges protruding from [tube-shaped upright element] 11" illustrated in Figures 1, 2, and 15 of the Ono patent as disclosing the C-shaped coupling members provided with the upright element. *See* Office Action, page 2. Applicant respectfully submits that Ono does not disclose the C-shaped coupling members recited in Claim 1. In particular, none of the protrusions in Ono, whether they be mounted sockets 21, perforated flanges 22, or brackets 25, 26, 27, 28, 29 (Figure 3), are C-shaped. The mounted sockets 21 and the perforated flanges 22 are circular-shaped. The brackets are relatively thin pieces projecting vertically from the outer surface of the pipe strut 111. In addition, the brackets (27, 28, 29), either alone or even in combination, do not substantially encompass the outer circumference of the upright element.

Furthermore, Ono does not disclose C-shaped coupling members that substantially encompass the upright element. The Applicant's system and method relates to a modular HD (Heavy Duty) support system constructed from HD (Heavy Duty) support system modules having a strongly increased resistance to breaking strain and strain of flexure for supporting a very huge and very heavy shattering for use in modern building. In Applicant's modular support system, upright elements and coupling part of the adjustable spindle assembly are provided with relatively thick C-shaped coupling members welded to and substantially surrounding the outer circumferences of the parts, thereby providing enhanced strength to those parts.

Appl. No. : 10/522,129
Filed : December 27, 2005

In summary, the Ono patent does not anticipate Claim 1 because Ono does not disclose the combination of claim elements recited in Claim 1 including C-shaped coupling members that *substantially encompass* the outer circumference of the upright element and the coupling piece.

B. § 103(a) Obviousness Rejections of Claims 2 and 4

Claim 2 was rejected under 35 U.S.C. § 103(a) over Ono in view of D'Alessio et al. (U.S. Patent No. 4,462,197). Claim 2, formerly dependent on Claim 1, has been rewritten in independent form. Likewise, Claim 4 was rejected was rejected under 35 U.S.C. § 103(a) over Ono in view of Anderson (U.S. Patent No. 4,741,505). Claim 4, also formerly dependent on Claim 1, has been rewritten in independent form. Applicant respectfully submits that Claims 2 and 4 are now allowable for reasons provided below:

Prima Facie Obviousness Requires a Teaching or Suggestion of All Claim Limitations

M.P.E.P. § 2143.03 recites that all claim limitations must be taught or suggested. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Claim 2

As amended, independent Claim 2 recites a combination of claim limitations including "a coupling and *anti-flexure* piece *movably positioned on the spindle*" Applicant respectfully submits that neither Ono nor D'Alessio, alone or in combination, teaches or suggests this claim limitation.

Applicant submits that Ono neither teaches or suggests the claim feature of "a coupling and anti-flexure piece *movably positioned on the spindle*". As Figures 15, 22, and 23 of Application copied below illustrates, in certain embodiments, Applicant's adjustable spindle assembly is provided with a height-adjustable coupling and anti-flexure piece. *See also*, Published Application, p. 4, paragraph 0070.

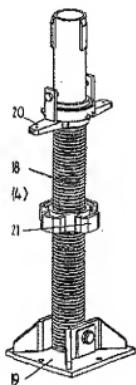


FIG.15

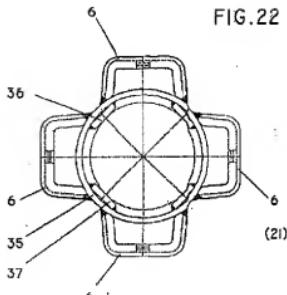


FIG.22

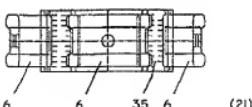


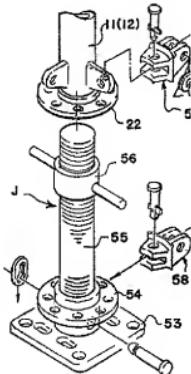
FIG.23

Figures from Application

In addition, in certain embodiments, Applicant's adjustable spindle assembly is provided with the butterfly nut 20 whose height can also be adjusted. The height-adjustable butterfly nut is configured to stop the bottom end of the upright element. *See* Published Application, p. 4, paragraph 0069.

In contrast, as shown in the relevant portion of Figure 15 of Ono's patent copied below, the Ono patent, while disclosing a height-adjustable cylindrical stopper 56 configured to stop the bottom end of the pipe strut 11 and a stationary perforated flange 54 provided on the lower portion of the threaded rod 55, *see* Ono, col. 9, ll. 14-20, fails to disclose the coupling and anti-flexure piece *movably positioned on the spindle*. The cylindrical stopper 56 of Ono is not a *coupling* piece configured to couple to another element, e.g., a girder; instead, it is a stopper configured to stop the bottom end of the pipe strut from further moving downward, similar to the butternut 20 in Applicant's adjustable spindle assembly. As shown in Ono Figure 15, the perforated flange 54 of Ono, abutting the jack base 53, is not height-adjustable. This conclusion is supported by related description in Ono. While the cylindrical stopper 56 is described as "fitted rotatably on the threaded rod 55," the perforated flange 54 is merely described as "provided on the lower portion of the threaded rod 55." Ono, col. 9, ll. 14-20. In sum, Ono does not disclose

the limitation of “*a coupling and anti-flexure piece movably positioned on the spindle*” recited in Claim 2.



Ono Figure 15

In addition, Applicant submits that Ono neither teaches nor suggests the coupling and *anti-flexure* piece that provides both coupling and *anti-flexure* function for the spindle assembly. This claim feature is supported by, at least, paragraph 0018 of the Published Application (“A coupling piece is also positioned on the spindle to increase its resistance against flexing (the free flexing length of the spindle is so reduced)”. The paragraph further describes that: “*Moreover, the coupling piece is provided with four welded C-shaped coupling members in such a way that in its mounted position one or more intermediated frames may be coupled up on the coupling parts and also on the upright elements and the spindle assemblies thereby considerably reducing the free flexing length of the spindle.*” It would be apparent to one skilled in the art that, in addition to the intrinsic anti-flexure property of the coupling piece itself, the fact that an intermediate frame can be mounted to the coupling and anti-flexure piece provides an enhanced anti-flexure for the spindle assembly by, e.g., preventing lateral or rotational stress on the spindle. As can be seen from Ono Figure 15 above, Ono does not disclose a structural element that provides such *combined coupling and anti-flexure function* for the spindle assembly.

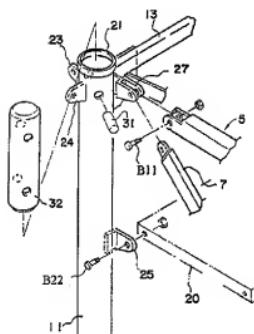
Appl. No. : 10/522,129
Filed : December 27, 2005

For these reasons, Applicant respectfully submits that Ono neither teaches nor suggests the claim limitation of “a coupling and *anti-flexure* piece *movably* positioned on the spindle”. Applicant further submits that this claim limitation is neither taught nor suggested by the D’Alessio patent.

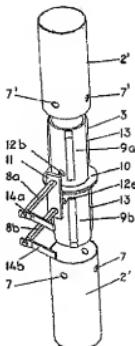
Claim 4

As amended, independent Claim 4 recites a combination of claim limitations including “*a ring* disposed substantially half way *on length of the tube profile*” and “locking pins each with *a non-circular oblong body* in cross section”. Applicant respectfully submits that neither Ono nor Anderson, alone or in combination, teaches or suggests the claim limitations of “*a ring* disposed substantially half way *on length of the tube profile*” and “locking pins each with *a non-circular oblong body* in cross section”.

Claim 4 recites “*a ring* disposed substantially half way *on length of the tube profile*”. The “tube profile” refers to the shape-retaining tubing comprising the coupling piece 3. See Application, p.1, paragraph 0006. This limitation is supported by at least Application Figure 4 copied below and also by the related description (“round intermediary sheet 10 welded in between.”). Published Application, p.3, paragraph 0061. The Examiner references to mounted socket 21 shown in Figure 4 of the Ono patent (copied below) as disclosing the ring disposed substantially halfway on the length of the tube profile. Applicant respectfully disagrees. As shown in the Ono Figure 4, the mounted socket 21 is disposed on the pipe strut 11, not on the pipe joint 32. The pipe joint 32 has a uniform diameter along its length (except for slight tapering at both ends) and, as such, does not disclose a ring disposed substantially half way on length of the tube profile.



Ono Figure 4



Application Figure 4

Furthermore, as can be seen from Ono Figure 4, Ono discloses a pin 31 having a *circular*, not non-circular elliptical, cross section.

Accordingly, Applicant respectfully submits that Ono neither teaches nor suggests the claim limitations of “*a ring disposed substantially half way on length of the tube profile*” and “*locking pins each with a non-circular oblong body in cross section*”. Applicant further submits that these limitations are neither taught nor suggested by Anderson.

Dependent Claims 5-12

Although Applicant has not addressed all the issues of the dependent claims, Applicant respectfully submits that Applicant does not necessarily agree with the characterization and assessments of the dependent claims made by the Examiner, and Applicant believes that each claim is patentable on its own merits.

In particular, the dependent claims are dependent either directly or indirectly on one of independent Claims 1, 2, 3, and 4. Applicant respectfully submits that pursuant to 35 U.S.C. § 112, ¶4, the dependent claims incorporate by reference all the limitations of the claim to which they refer and are therefore allowable if the independent Claims 1, 2, 3, and 4 are allowable in view of the cited references.

Appl. No. : 10/522,129
Filed : December 27, 2005

Applicant submits that Claims 1, 2, 3, and 4 are allowable for reasons given above. Therefore, Applicant respectfully requests the withdrawal of all claim rejections and prompt allowance of the claims.

Conclusion

In light of the above, reconsideration and withdrawal of the outstanding rejections are specifically requested. In view of the foregoing remarks, Applicant respectfully submits that the Claims 1-6 of the above-identified application are in condition for allowance. However, if the Examiner finds any impediment to allowing all claims that can be resolved by telephone, the Examiner is respectfully requested to call the undersigned.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: 3/14/08

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